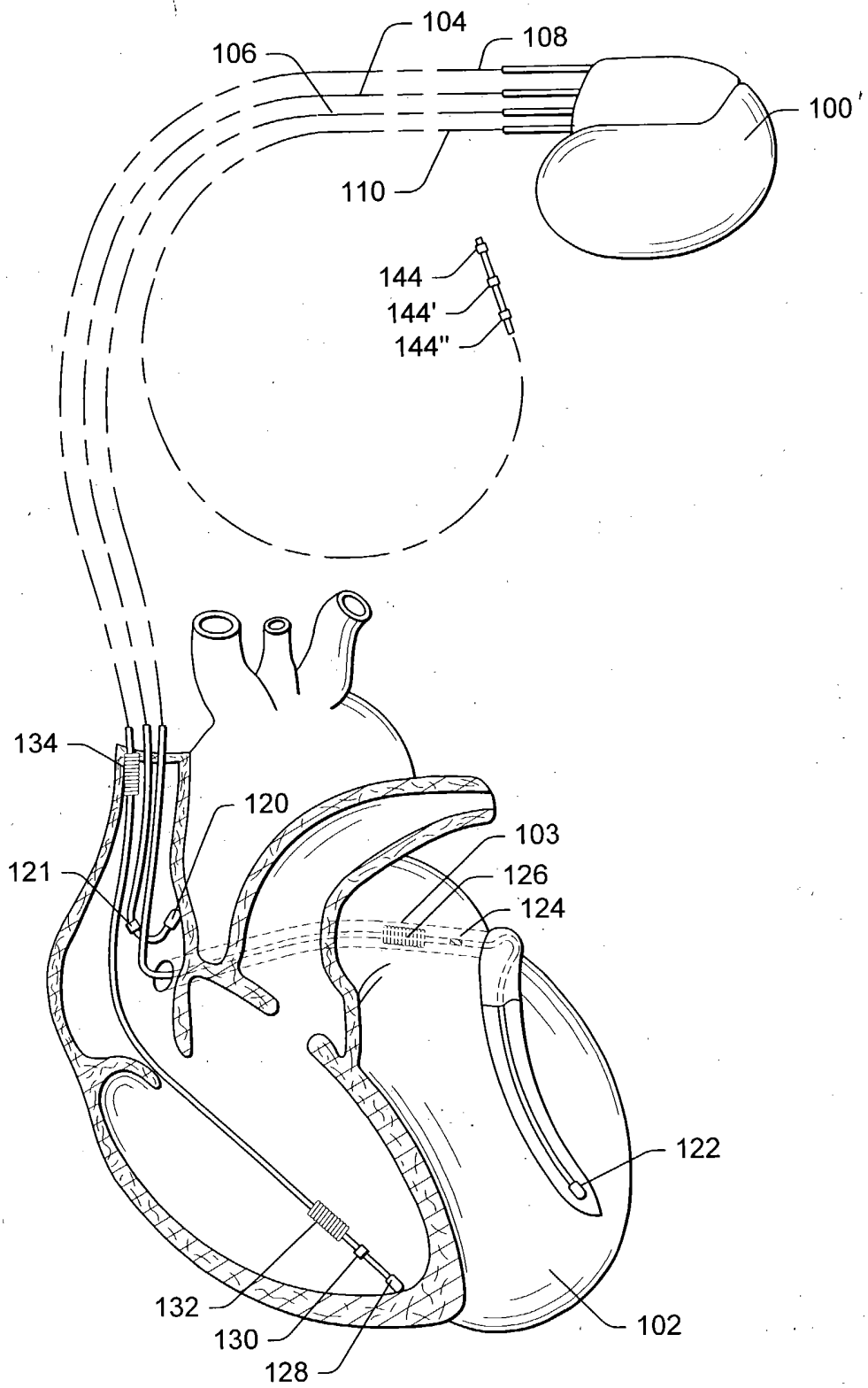

104
108
106
100'
110
144
144'
144"
134
120
103
121
126
124
122
132
130
128
102

Fig.1

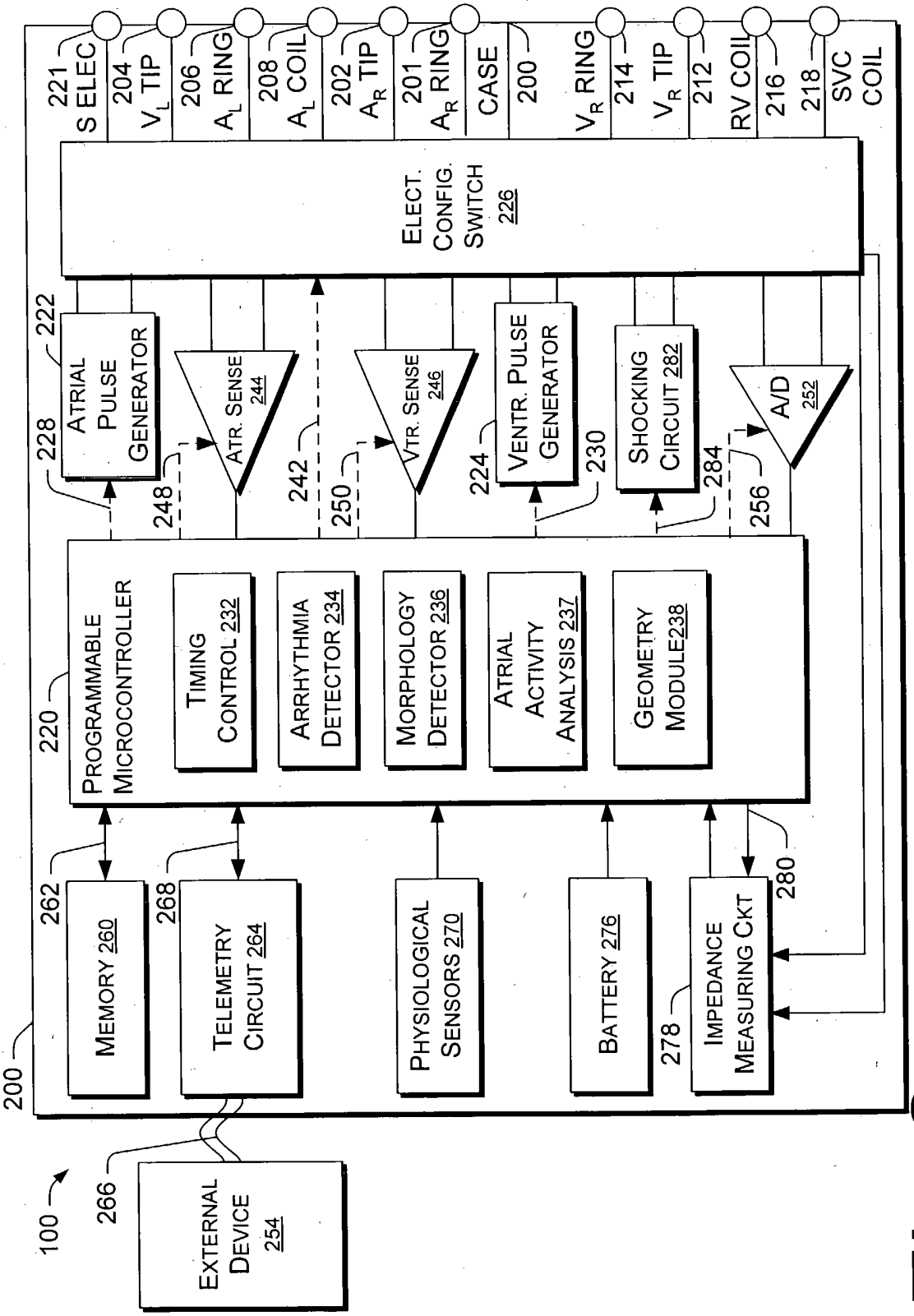

100
200
266
EXTERNAL DEVICE 254
262
MEMORY 260
268
TELEMETRY CIRCUIT 264
PHYSIOLOGICAL SENSORS 270
BATTERY 276
278
IMPEDANCE MEASURING CKT
280
220
PROGRAMMABLE MICROCONTROLLER
TIMING CONTROL 232
ARRHYTHMIA DETECTOR 234
MORPHOLOGY DETECTOR 236
ATRIAL ACTIVITY ANALYSIS 237
GEOMETRY MODULE238
228
ATRIAL PULSE GENERATOR
222
248
ATR. SENSE 244
242
250
VTR. SENSE 246
224
VENTR. PULSE GENERATOR
230
SHOCKING CIRCUIT 282
284
256
A/D 252
ELECT. CONFIG. SWITCH 226
221 S ELEC
204 $V_L$ TIP
206 $A_L$ RING
208 $A_L$ COIL
202 $A_R$ TIP
201 $A_R$ RING
CASE 200
214 $V_R$ RING
212 $V_R$ TIP
216 RV COIL
218 SVC COIL

Fig.2

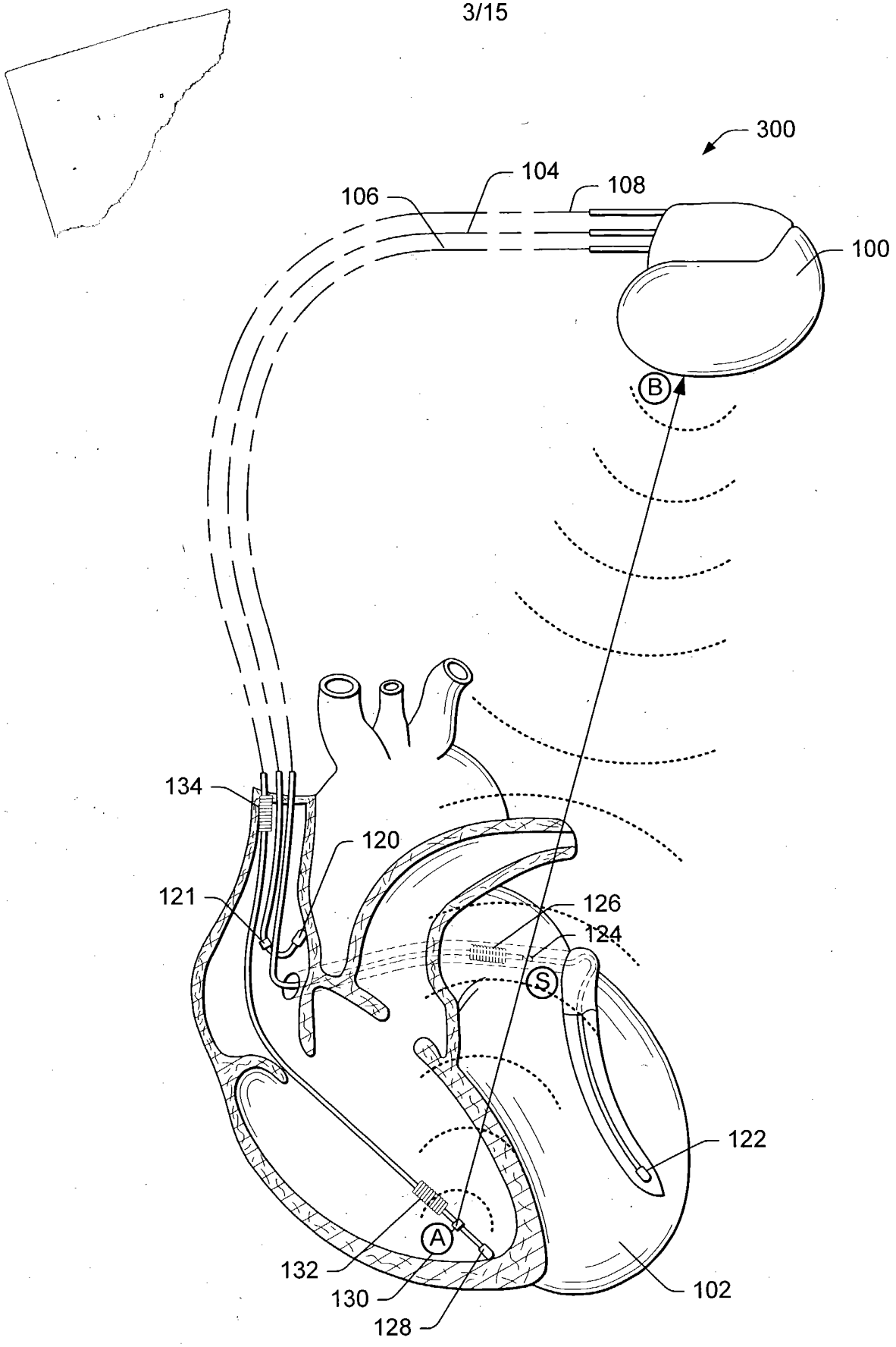



Fig.3

EXEMPLARY PLOT OF DISPLACEMENT VERSUS PERCENTAGE CHANGE IN POTENTIAL

400

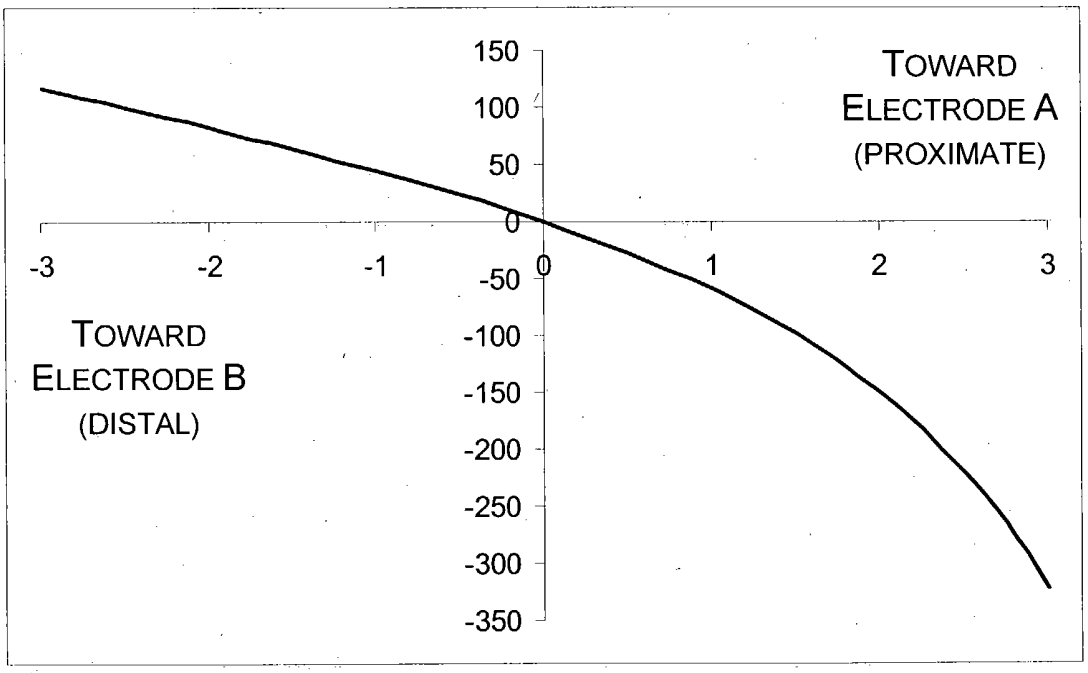



Fig.4

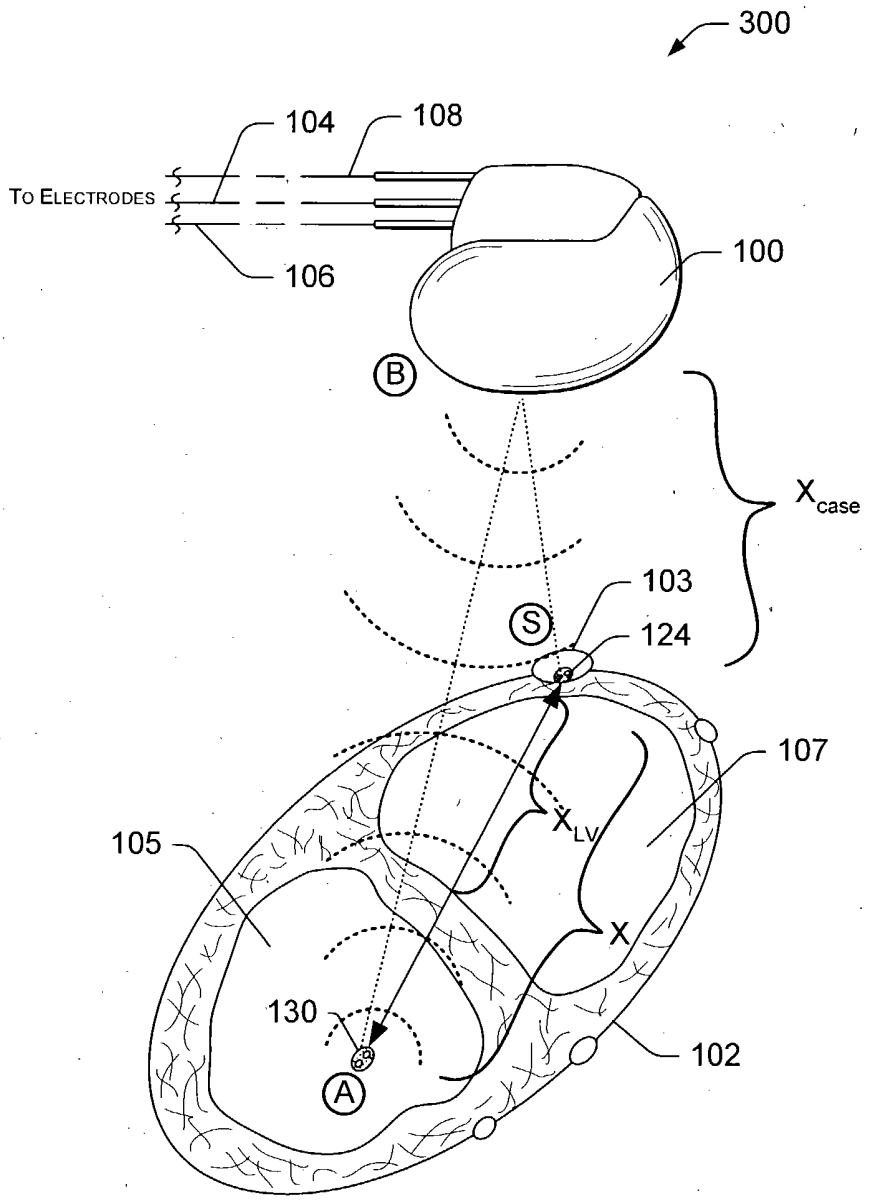

300
104
108
TO ELECTRODES
106
100
B
$X_{case}$
103
S
124
107
$X_{LV}$
105
X
130
A
102

Fig.5

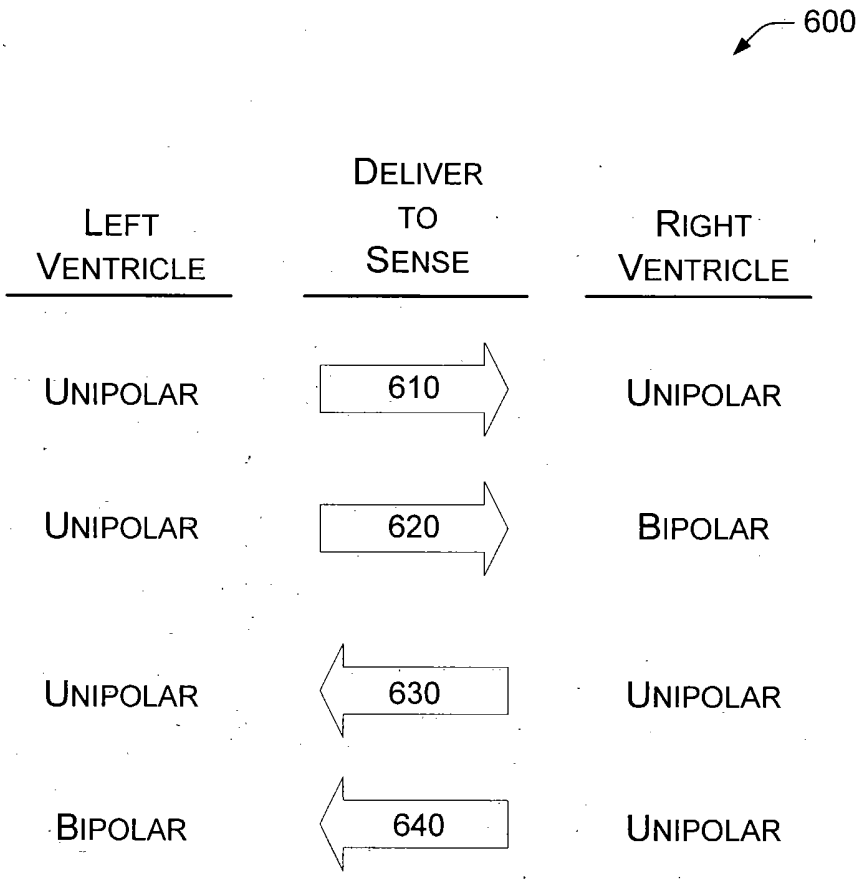
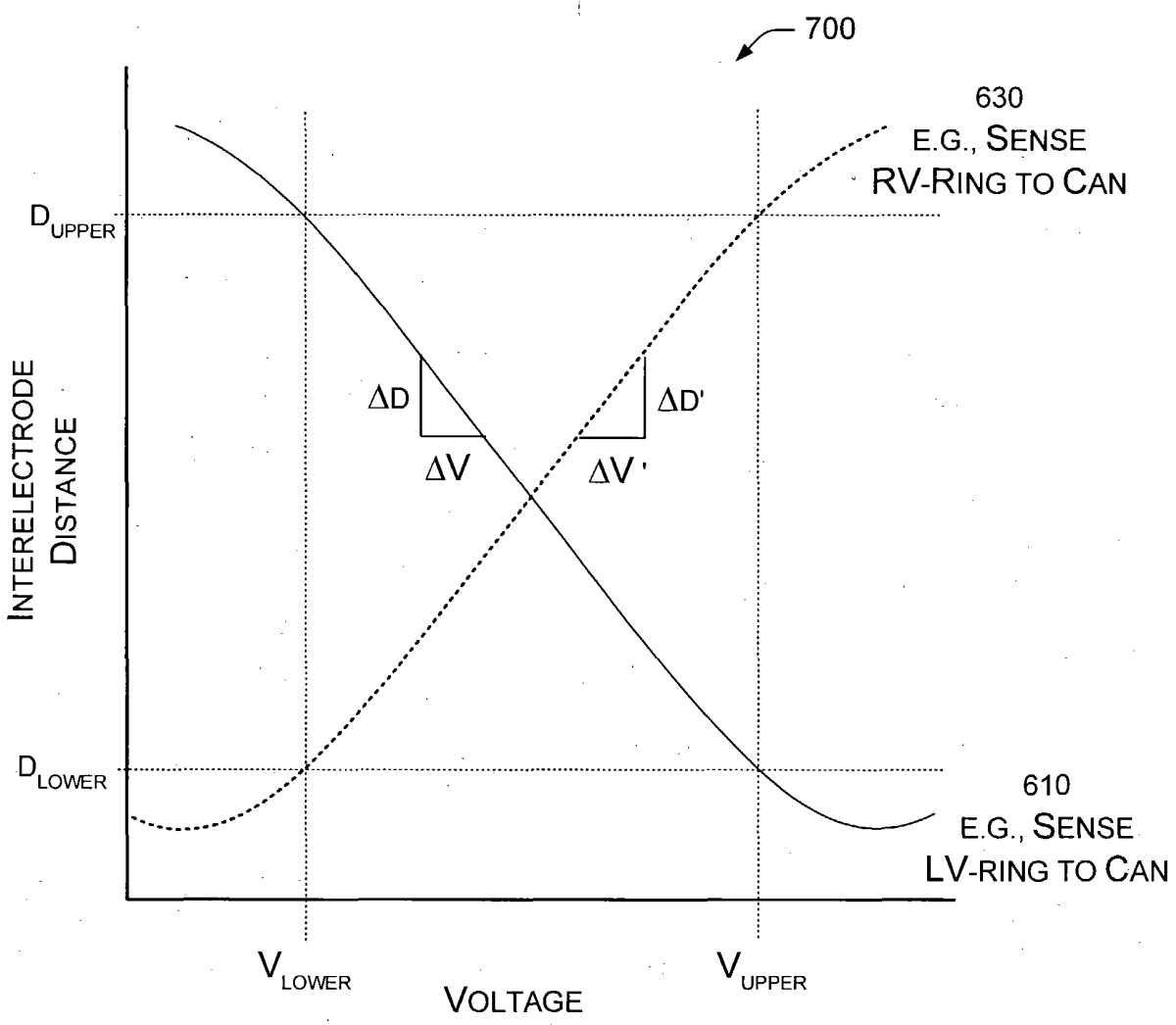

600
LEFT VENTRICLE
DELIVER TO SENSE
RIGHT VENTRICLE
UNIPOLAR
610
UNIPOLAR
UNIPOLAR
620
BIPOLAR
UNIPOLAR
630
UNIPOLAR
BIPOLAR
640
UNIPOLAR

Fig.6




POLYNOMIAL MODEL

$$Y = C0 + C1*X + C2*X^2 + C3*X^3$$

LINEAR MODEL

$$Y = C0 + C1*X$$

$$C1 = M = \Delta D/\Delta V = \Delta D'/\Delta V'$$

OTHER MODEL

$$Y = F(X) \text{ AND/OR OTHER PARAMETER}$$

Fig.7

EXEMPLARY METHOD

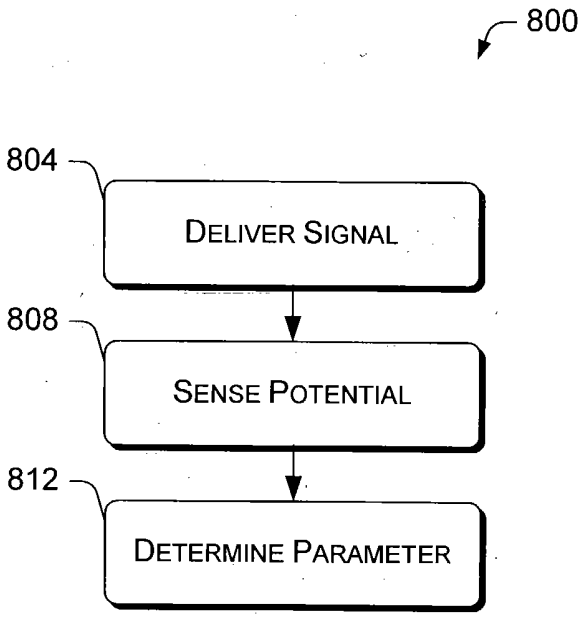



Fig.8

EXEMPLARY METHOD

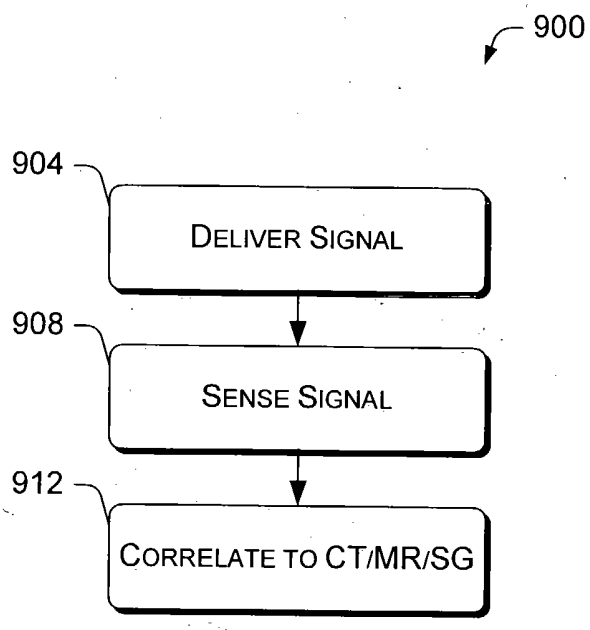



Fig.9

EXEMPLARY METHOD

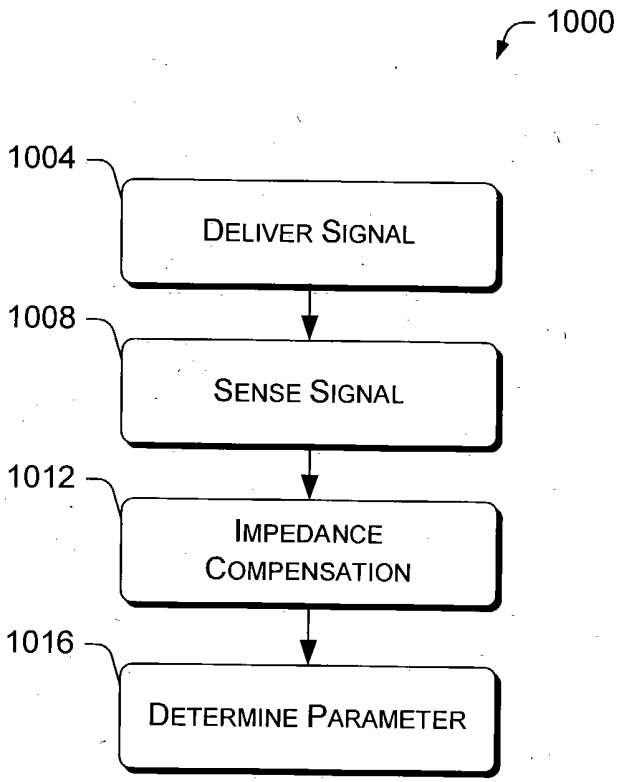
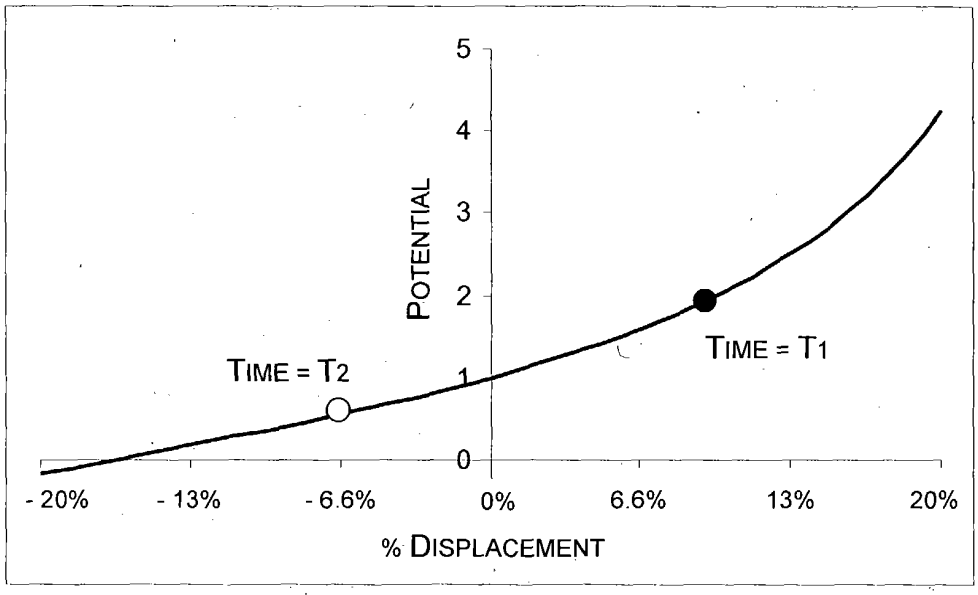



Fig.10

1110

NORMALIZED POTENTIAL VERSUS DISPLACEMENT




1120

NORMALIZED POTENTIAL AND DISPLACEMENT VERSUS TIME

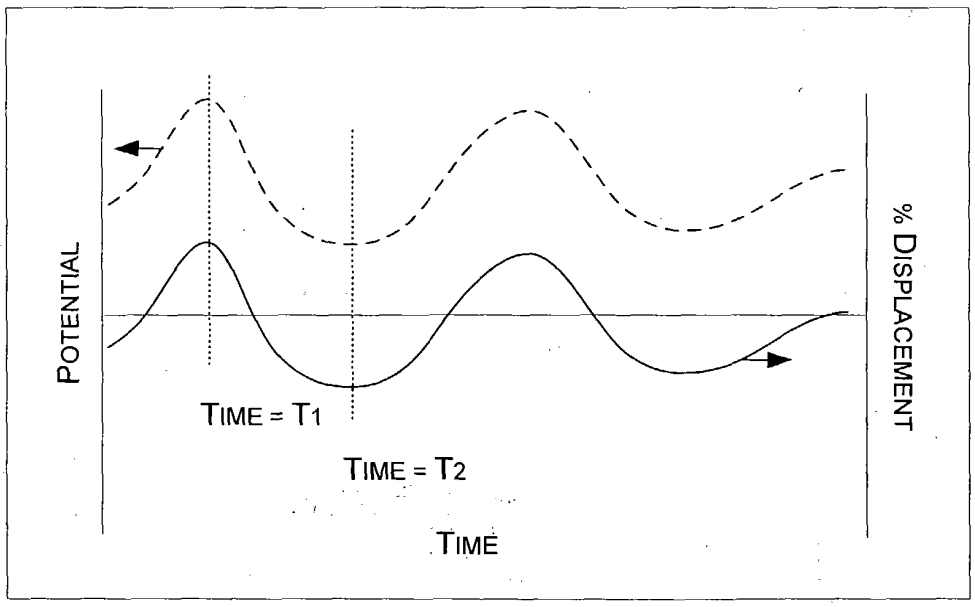



Fig.11

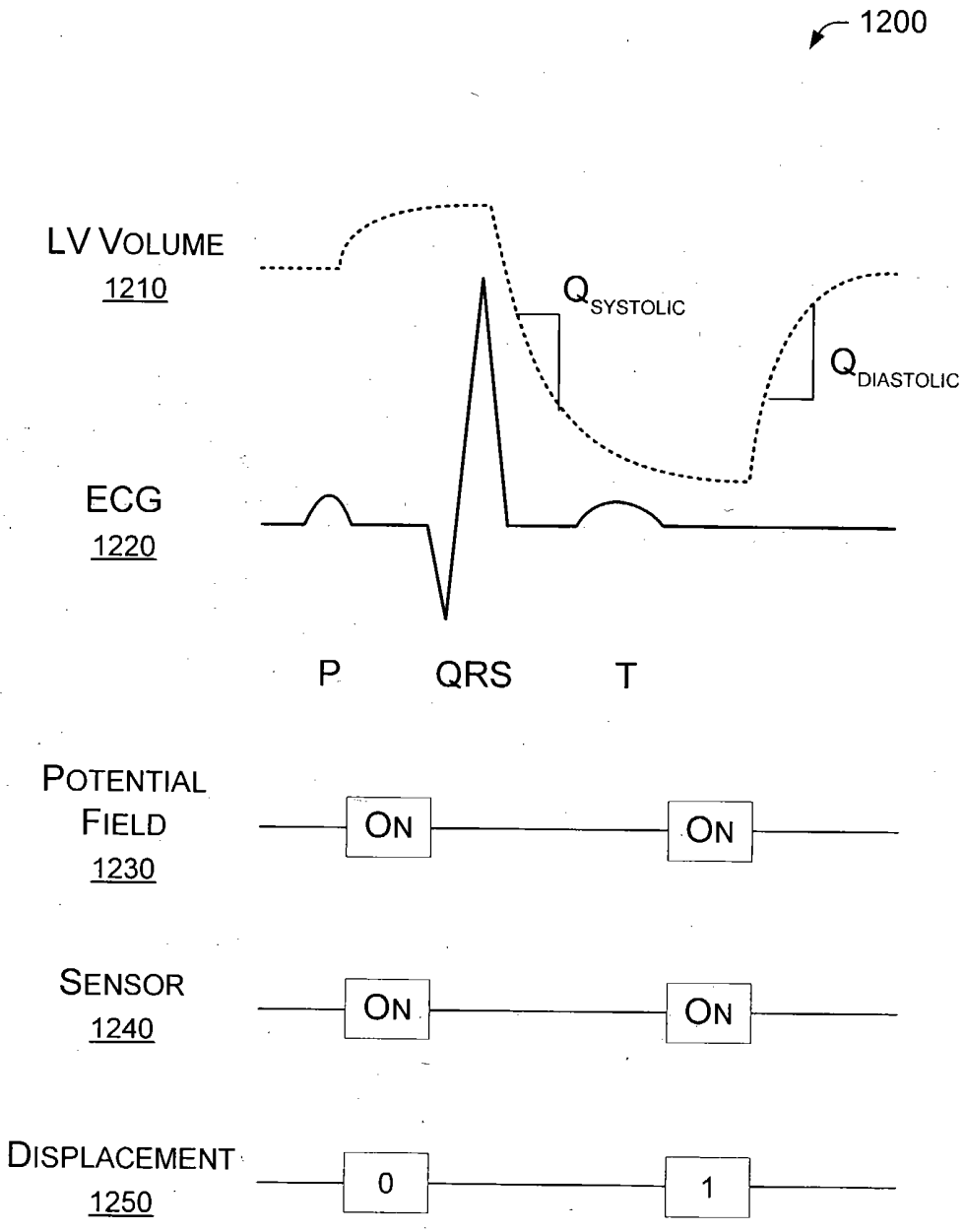

1200
LV VOLUME
1210
$Q_{SYSTOLIC}$
$Q_{DIASTOLIC}$
ECG
1220
P
QRS
T
POTENTIAL FIELD
1230
ON
ON
SENSOR
1240
ON
ON
DISPLACEMENT
1250
0
1

Fig.12

EXEMPLARY METHOD

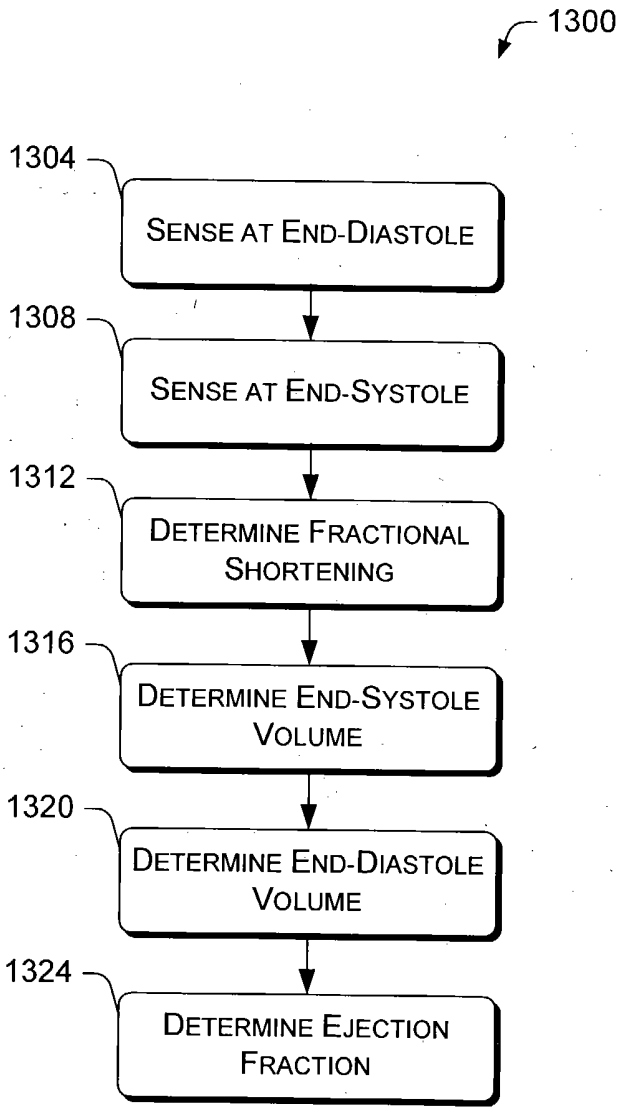



Fig.13

EXEMPLARY METHOD

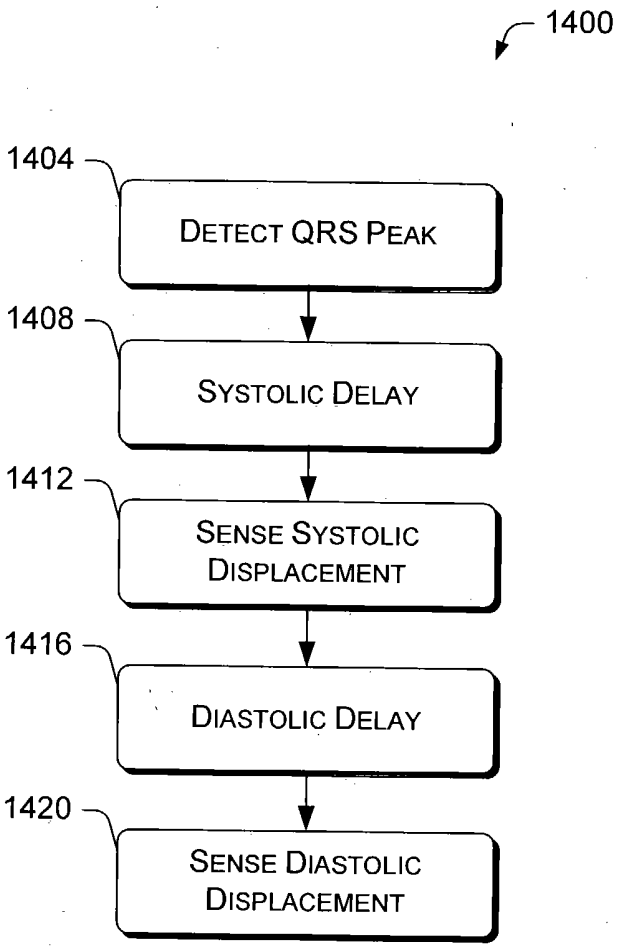



Fig.14

EXEMPLARY METHOD

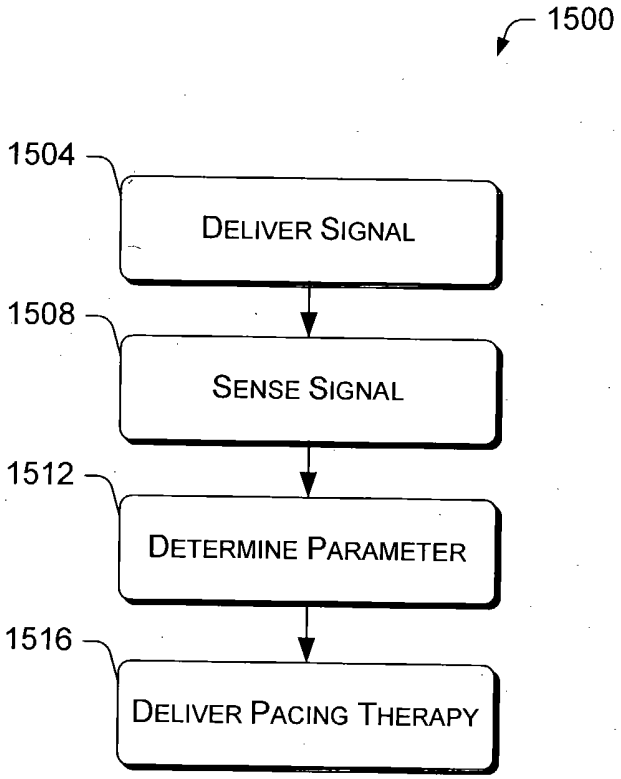



Fig.15